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# The Fishing Industry in Third World Countries



(CIDA photo: M. Faugere)

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# The Fishing Industry in Third World Countries



(CIDA photo: M. Faugere)

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## Problems in the Fisheries Sector

The majority of fishermen in the Third World operate on a small scale: they generally use unpowered boats and work close to shore. Their catch is intended primarily for subsistence consumption, with any surplus going to domestic and outside markets. These fishermen are generally illiterate and have only rudimentary mechanical skills.

Following the lead of the developed nations, some Third World countries have established industrial fisheries. Examples are Peru, South Korea, Morocco, Ghana, Thailand and Cuba. Their fishermen operate with large boats on the open sea, selling their sizable catches on the international market.

Since 1980, countries with coastlines — in large part developing countries — have established jurisdiction over waters within 320 kilometres of their shores under the new system of exclusive economic zones. However, coastal developing countries do not have the human, physical and financial resources to provide adequate administration for these territories. Because detailed statistics on marine resources and appropriate knowledge in biology, oceanography and other related disciplines are lacking, these countries cannot develop a sound exploitation program for these resources.

Many areas are being overfished resulting in a decline in exploitable marine species. This is especially true when distant-water fleets from industrialized countries fish in the territorial waters of developing countries.

Another problem connected with fishing in the Third World is wasted catches. Many fishermen do not know how to use incidental catches — lower quality fish and underexploited species — and discard a considerable quantity into the sea. Furthermore, a significant portion of the resource is wasted because of inefficient methods of processing, handling, storage and distribution.

Pollution in the oceans is also harmful to marine species. It is easy to imagine the deleterious effects of human and radioactive wastes, oil slicks, chemical waste, pesticides and detergents on shrimp, oysters, clams, trout, salmon and other marine animals.

## Canadian Solutions

Developing countries, in order to improve their fishing industries, must concentrate their efforts on managing their marine resources, training an adequate work force, and upgrading systems for processing, storage and distribution. It is in terms of these needs and the areas of Canadian expertise in the fisheries sector that Canada has selected the following areas of activity: resource management, aquaculture, processing, distribution, marketing and training. The Canadian International Development Agency (CIDA) has the responsibility for administering fisheries projects in these sectors.

## Resource Management

Resource management consists mainly of measuring the abundance of the marine stocks in a given zone, evaluating the rates of growth, mortality and other biological factors, such as the restocking capacity, and establishing regulations to control fishing operations.

In one such project, the *Instituto del Mar del Peru* and the Peruvian Ministry of Fisheries requested CIDA assistance in carrying out a program of research on the anchovy and its environment. The Agency provided a grant of approximately \$1.1 million for the project, which started in 1976. In conducting its research the Canadian team, drawn from Dalhousie University in Nova Scotia and the Bedford Institute of Oceanography, in cooperation with Peruvian scientists, found explanations for a number of the factors governing the abundance of the species.



Also, since 1981 CIDA has been operating a fishery protection and surveillance program in Senegal. The program comprises a scientific evaluation of fishing stocks, the administration of regulations relating to fishing activities, and the surveillance of foreign and Senegalese fleets fishing within the 320 kilometre protected zone. The program, costing \$17,875,000 is divided into three elements: scientific, administrative and operational, all of which include training activities.

### **Aquaculture**

Aquaculture is defined as the breeding and rearing of aquatic species for commercial purposes. This technique enables a country to develop resources within national boundaries and to eliminate the problems of jurisdiction connected with offshore fishing.

In Thailand, the National Inland Fisheries Institute was created in 1975 to oversee the management of inland fisheries and to increase fish production through various techniques, including aquaculture. This organization, which is under the jurisdiction of Thailand's Ministry of Fisheries, obtained a grant of \$1.15 million from CIDA in 1972. The Canadian contribution enabled Canadian experts to be sent to Thailand, trainees from that country to study in Canadian universities and equipment to be purchased for conducting research in an aquatic environment.

### **Processing, Distribution Networks and Marketing**

In order to process fish efficiently, proper facilities must be built: systems for unloading fish; processing, refrigeration and freezing plants; packaging equipment and materials; mechanical presses; canning machines; driers and control equipment.

Canada has developed expertise in fish processing facilities, and in distribution and marketing networks.

The Government of Canada allocated \$1.5 million in 1981 to the Association of South East Asian Nations (ASEAN) within the framework of a project for processing fish products. The project consists of providing the services of fish technology experts and suitable equipment, as well as scholarships to 10 citizens of the member countries of ASEAN (Indonesia, Thailand, Malaysia, Singapore and the Philippines) for post-secondary studies in Canadian universities and colleges. The project's goals are to use marine resources more efficiently, raise the standard of living of fishermen and increase fish harvests.

Another example of CIDA's involvement in this field is the Centre for Assistance to Small-Scale Fishing project in Senegal. This project, in progress since 1977, is designed to improve the quality, packaging and distribution of small-scale fish products in Senegal. It comprises two main components: the construction of an administrative centre and eight fish-processing centres, and the supplying of technical assistance. It also includes training Senegalese managers and technicians so as to ensure adequate functioning and good direction of the various centres.



(CIDA photo)

### **Training**

In the fisheries sector, qualified workers are needed at all levels: fishermen and workers who possess the techniques of catching, processing and preserving fish; extension staff to train them in these techniques; and administrators, economists, scientists and professionals with appropriate academic training. CIDA accordingly funds training activities in all of these categories.

For example, under a fishing-boat motorization project in Senegal, for which CIDA allocated \$3.17 million and which lasted from 1972 to 1978, training was provided for managers, warehousemen and approximately 30 Senegalese mechanics. These people now run a centre that assists in the motorization of fishing boats and provides continuing education in preventive maintenance for fishermen. This project made it possible to double the fish catch and triple revenues.



CIDA is also participating in two training projects in Thailand. The first project, in operation since 1981 and funded under a \$500,000 grant, is supporting a fishing cooperative in Ban Ao Makhm Pam to enable fishermen to obtain credit easily, to buy fishing equipment at a reasonable price, and to realize a profit on their production. It also includes the teaching of fish-breeding techniques and the installation of the necessary infrastructure such as a refrigeration plant, a potable water supply system, a boat and motor repair shop, etc.

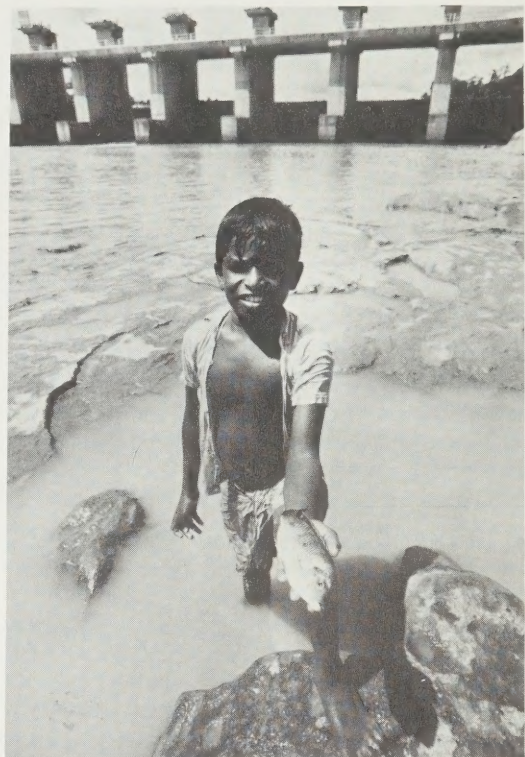
Under the second project, CIDA is disbursing \$215,000 to send a Canadian adviser to the Thailand Department of Fisheries for a two-year period to provide technical support to Thai authorities in the formulation of fisheries projects.

### **CIDA's Principal Operations in the Fisheries Sector**

CIDA provides assistance in the fisheries sector through a variety of channels. One is by direct, or bilateral, aid where the government of a Third World country receives assistance from the Canadian government in selected areas of the fisheries sector.

CIDA also provides aid through international organizations, including United Nations agencies such as the Food and Agriculture Organization, Unesco and the United Nations Development Program, and financial institutions such as the World Bank and the regional development banks.

Canadian and international non-governmental organizations also receive assistance from CIDA in their



(CIDA photo: D. Mehta)

fisheries development projects, as does the VADA (Voluntary Agricultural Development Assistance) Program, which represents the efforts of the federal and provincial governments to combat hunger in the Third World.

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